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# WOOD DRAWER GUIDES

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There are a lot of things to consider when adding a drawer to a project. Of course, the first thing you think of is sizing the drawer to fit into its opening.

But the drawer also has to slide in and out smoothly. So the drawer has to fit loose enough to slide easily, but not so loose that it racks when pulled out. To help with this, runners and guides are usually added. Of course, the types of runners and guides you use will depend on the project and how it's put together.

Different styles of wood drawer guides are used for different sizes and types of drawers. Some, for example, are mounted at the sides, while others are guided at the bottom. I thought you might like to know some of the how's and why's of adding drawer guides. They may be very useful on your next project.

## GLOSSARY

Before going on, it's worth it to take a few moments to explain the meaning of some of the key words I use here.

**RUNNERS.** Runners are strips of wood that support a drawer as it's opened and closed. These can be located below the drawer, above it, or at its sides, and they may also serve as guides for the drawer.

**GUIDES.** Guides prevent a drawer from moving side-to-side. Often these are thin wood strips applied to the sides of the carcass. But for wider drawers, the guide can be located at the center, below the drawer.

**SLIDES.** Slides are metal runners or guides attached to the sides of a drawer or below a drawer. This hardware creates a gap on each side. You'll need to cover it with a rabbeted front or a false drawer front.

**GLIDES.** Glides are added to reduce the friction between a drawer and a runner. Usually made of nylon, glides can be either buttons or strips of tape.

**STOPS AND CATCHES.** Stops keep a drawer from being pushed too far into the case. And catches prevent a drawer from being pulled completely out.

**KICKERS.** Kickers are strips of wood that

are attached above a drawer to prevent the drawer from dropping as it's opened.

## SIDE-MOUNTED DRAWERS

Side-mounted runners are one of the most common ways to support and guide a drawer. The case illustrated in Fig. 1 is a good example. There's nothing between the top and bottom drawers, so the best solution is to mount them at the sides.

Side-mounted drawers are a two-part system. There are wooden runners screwed to the sides of the case. And stopped grooves routed in the drawer sides that fit over these runners. The location of the grooves isn't critical, but I find it easiest to center them on the drawer sides.

These runners may sound like a lot of work, but they do a lot of work. They support the weight of the drawer and guide it as it's opened. They even provide a built-in stop as the door is closed. The only thing you may want to add is a catch so the drawer can't be pulled out completely (see page 2).

**INSTALLATION.** When installing runners, you need to watch for three things. They must be lined up with the grooves in the drawers. They must be level. And they

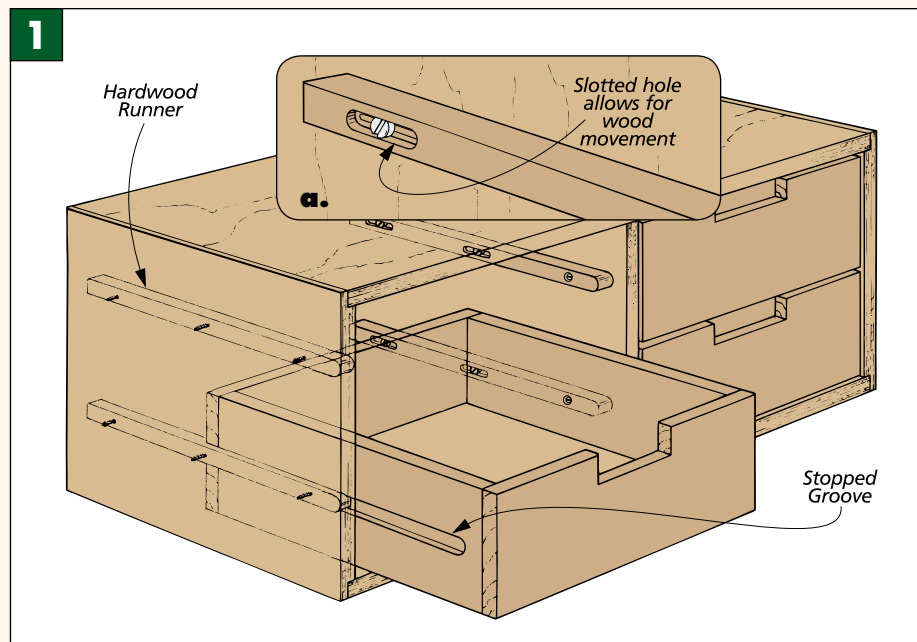
must be set back the right distance from the front of the case. But this isn't as hard as it sounds. To line up the runners and get them level, use a simple spacer. Its height should match the location of the groove, plus an extra  $\frac{1}{16}$ " for the gap below the drawer. Then when attaching the runners, all you have to worry about is getting them set the correct distance from the front.

**EXPANSION.** If the runners are screwed to solid wood, they have to allow the side panels to expand and contract with changes in humidity. Otherwise, the sides of the carcass could split. The solution is to use a slotted shank hole at the back of the runner so the panel can move (Fig. 1a).

You'll find that once the drawers are in place, they won't necessarily slide smoothly. All that's required is a little sanding. But remember, with side-mounted drawers, you should sand the bottoms of the runners only. Sanding the top will change the position of the drawer slightly.

## BOTTOM-SUPPORTED DRAWERS

Like the side-mounted drawers in the case shown, the drawer at the bottom doesn't have a frame under it either. But I didn't



mount this drawer on the sides. Instead, it's supported from the bottom.

The reason is simple. This drawer is large and wide. A large drawer is harder to build perfectly square and exactly the right size, so it's harder to build it to fit well in an opening. And because it's wide, the drawer will rack much easier as it's pulled out. There are two solutions to getting a large, wide drawer to slide in and out smoothly. One is to support the weight of the drawer by adding runners at each side of the case. And the other is to guide the drawer with a center guide system.

**RUNNERS.** To support the weight of the drawer, I added runners to the sides of the wardrobe case (Fig. 2). These runners were made of hard maple, because it's both smooth and durable.

I installed the runners  $\frac{1}{16}$ " above the rail cap at the front of the case. This automatically sets the gap between the drawer and the guide, which ensures that the drawer won't rub against the guide.

**KICKERS.** Runners will support a drawer from below, but drawers need support from above, too. Otherwise, the front of the drawer will drop as it's pulled out. With the case shown here, the shelf cleat above the drawer prevents this from happening. But if the cleat weren't there, you would have to add kickers.

**GUIDE SYSTEM.** Now that the drawer has some support, the next step is to work on getting the drawer to slide in and out smoothly. On a narrow drawer, you

could add thin strips at the sides of the case to guide it. But with a wide drawer, the best solution is to guide it at the center — below the drawer.

With a wide drawer, a single guide works best. This is simply a single strip of wood that the drawer rides over. To get the drawer to ride over the guide, I create a custom-fitted groove on the bottom of the drawer. But this groove isn't cut out of the bottom (which is only  $\frac{1}{4}$ "-thick plywood). Instead it's "built up" on the bottom.

To do this, cut a notch on both the front and back of the drawer and glue narrow guide runners on either side. This creates a "channel" for the guide to run in (Fig. 3).

There are two things to keep in mind about this system. You don't want the weight of the drawer to rest on the guide. The drawer should rest on the runners at the sides. So when building the drawer, make sure the drawer bottom is high enough to pass over the guide.

Also, you'll need to add a false front to cover the notches in the drawer. But don't

be tempted to use this false front as a stop. On the other hand, you don't want to stop the drawer against the thin back of the case. Either of these "solutions" can create problems for you later. Instead, your last step will be to add a few stops and catches (see below).

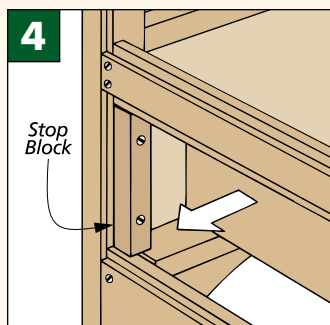
## Drawer Stops & Catches

There are a couple of questions that often get overlooked when designing a project: "How do the drawers stop when you're pushing them closed?" and "What prevents them from being pulled all the way out (and spilling their contents on

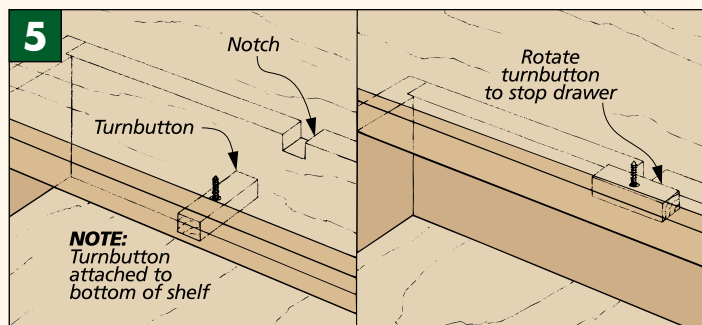
the floor)?" The answers to both of these questions are fairly simple.

The best way I've found to stop a drawer when closing it is to add a stop block (or a pair of blocks) at the back of the case, like the one shown in Fig. 4.

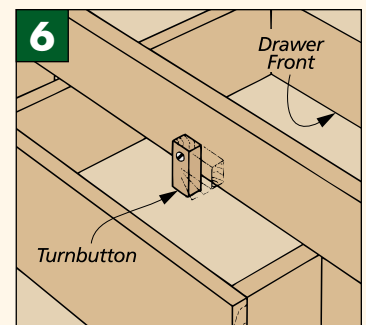
When pulling a drawer open, the answer depends on the carcass. If there's a solid panel above the drawer, you'll need to use a small block and cut a notch in the drawer. Otherwise, you can use a turnbutton (Figs. 5 and 6).



**Stop In.** A drawer shouldn't stop against the case back. A simple block does the trick.



**Panel Catch.** To keep a drawer from coming all the way out, add a turnbutton. When there's a solid panel above the drawer, you'll need to cut a notch in the back of the drawer.



**Frame Catch.** When there's a case frame, a simple turnbutton is all you need.

